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Notes on Forestry and Wood-use



Purdue University,
Cooperative Extension Service
Lafayette, Indiana

Mimeo F-22

A KEY FOR THE SUMMER IDENTIFICATION OF SOME DECIDUOUS TREES & SHRUBS IN INDIANA

by E. J. Lott

1. Leaves opposite 2
1. Leaves alternate 13
2. Leaves simple 3
2. Leaves compound 10
3. Leaves 3-5 lobed 4
3. Leaves not lobed 7
4. Leaves with rounded sinuses and coarse teeth 5
4. Leaves with acute sinuses and fine teeth 6
5. Usually 5-lobed, in a flat plane, without stipules ----- Sugar Maple
5. Usually 3-lobed, leaves drooping, broader than preceding, stipules often present ----- Black Maple
6. Deeply-cut leaves, 5-lobed, silvery beneath; found near streams or on wet sites ----- Silver Maple
6. Not so deeply-cut, usually 3-lobed, smaller preceding; found on both wet & dry sites ----- Red Maple
7. Leaves about 8" in length, 6" in width 8
7. Leaves 3" - 4" long, 2" - 3" broad 9
8. Stout twigs with solid pith; white flowers; cigar-shaped fruit pods; leaves usually in whorls of 3 ----- Catalpa
8. Large twigs with hollow pith; tips often winter-killed; purple flowers; ovoid, pointed fruit pods; leaves rarely in whorls of three --- Empress Tree*
9. Oval leaf, with parallel leaf veins curved toward tip; alligator bark; buttonlike flower buds and small pointed leaf buds; fruit a cluster of green berries which turn red in the fall ----- Flowering Dogwood
9. Leaves almost heart-shaped, with netted veins; fruit a two-celled capsule, with 2 seeds in each cell; buds almost round, with several scales ---- Lilac**

* An exotic tree which has escaped frequently in southern Indiana.

** An exotic shrub which has been planted extensively in Indiana.

10.	Leaves pinnately compound	11
10.	Leaves palmately compound	12
11.	3-5 leaflets with margins irregularly notched; round, green twigs, with small white buds -----	<u>Boxelder</u>
11.	7 leaflets with entire margins; gray-brown twigs, flattened at the nodes -----	<u>White Ash</u>
12.	5 leaflets; buds not resinous -----	<u>Ohio Buckeye</u>
12.	7 leaflets; buds resinous -----	<u>Horse-Chestnut***</u>
13.	Leaves simple	14
13.	Leaves compound	37
13.	Leaves doubly compound	42
14.	Leaves of several different shapes on the same tree	15
14.	Leaves not variable in shape	16
15.	Leaves entire or 2- or 3-lobed, all on same tree; green aromatic twigs; reddish-colored bark -----	<u>Sassafras</u>
15.	Leaves with coarsely-toothed margins (preceding have entire margins) , usually not as variable as sassafras; yellow-barked roots; fruit resembles that of blackberry -----	<u>Red Mulberry***</u>
16.	Long leaf stems	17
16.	Short leaf stems	22
17.	Leaf stems flat	18
17.	Leaf stems round	19
18.	Leaves triangular with <u>stout</u> , flat stems; twigs often ridged; buds large and glossy -----	<u>Cottonwood</u>
18.	Leaves triangular to round, <u>with coarse teeth on margins</u> ; and with fine, flat stems; twigs smooth; buds dusty-looking -----	<u>Large-tooth Aspen</u>
19.	Stipules or stipule scars present.....	20
19.	Stipules absent	21
20.	Large, maple-like, 3-5 lobed leaves; swollen base of leaf, stem completely covers bud; whitish bark which scales off in patches; fruit a smooth ball hung on a stem -----	<u>Sycamore</u>
20.	3-lobed leaves, with the top lobe widely-notched; fruit resembles a little, dry pineapple; tulip-like flowers -----	<u>Tuliptree</u>
21.	Heart-shaped leaves with entire margins; both ends of leaf stem enlarged; fruit a thin, 3-inch pod-----	<u>Redbud</u>
21.	Star-shaped leaves; corky wings on twigs; fruit a spiny ball; river bottoms and wet lands of southern Indiana -----	<u>Sweet Gum</u>
21.	Heart-shaped leaves with lopsided bases and finely-toothed margins; several small, round, nut-like seeds, suspended by a stem from a leaflike wing-----	<u>Basswood or Linden</u>

*** An exotic tree which has been planted widely in Indiana.

*** Many escaped, exotic mulberries will be found which have extremely variable leaves.

22. Twigs bearing single, short thorns at the nodes, fruit a "hedge-apple" ----- Osage-orange
22. Twigs without thorns 23
23. Long, narrow leaves, with stipules; fine twigs----- Willows
23. Leaves without stipules 24
24. Sturdy trees bearing acorns; stout twigs with clustered terminal buds 25
24. Trees without acorns; terminal buds not clustered 32
25. Leaves with rounded or blunt-pointed lobes - no bristles on tips; acorns maturing in one year; bark gray except in one species 26
25. Leaves with bristle-pointed tips (except in one species which has entire leaves); acorns maturing in 2 years; bark usually dark in color 29
26. Leaves with rounded lobes and deeply-cleft sinuses 27
26. Leaves with "Wavy" margins and shallow sinuses 28
27. Rounded-lobed leaves, deeply and evenly cleft ----- White Oak
27. Rounded-lobed leaves, with terminal lobe much larger than others, and cleft nearly to midrib at center of leaf; corky ridges often found on vigorous twigs ----- Bur Oak
28. Leaves with shallow-lobed margins, dark green and leather-looking on upper surfaces, duller green beneath, prominent dark-colored, sharply-ridged, deep fissured bark, frequents dry ridge tops ----- Chestnut Oak
28. Wavy-margined leaves, not darker green and leathery-looking above as in chestnut oak, gray bark like white oak, frequents limestone soils ----- Chinquapin Oak
28. Leaves wider toward tip, with wavy margins or blunt teeth; bark like white oak, young bark often peels back on smaller limbs; acorns borne on very long stalks, found in wet places, often with sweet gum, pin oak, soft maples, white elm, and other wet land species ----- Swamp White Oak
29. Leaves with bristled-tipped lobes 30
29. Entire-margined, straplike leaves 31
30. 7- to 9-lobed leaves, with clefts reaching halfway to midrib, diminishing regularly to wedge-shaped base; young bark smooth and dark green, gradually breaking into flat light-colored ridges, with pink inner bark; an inch-long acorn, set in saucer-like cup ----- Red Oak
30. 7-lobed leaves, extremely variable in shape, with dark, leather-looking upper surfaces; bark dark and "blocky" in appearance, with yellow inner bark; $\frac{1}{2}$ inch acorn in a bowl-like cup ----- Black Oak
30. Leaves smaller than preceding with 5 to 7 lobes, cut almost to midrib, bark dark and tight; pinlike branches on limbs, little acorns in shallow cups, a tree of the wet lands ----- Pin Oak

31. Strap-like, entire leaves; bark and form like pin oak, but without the pin-like branches ----- Shingle Oak
32. Leaves with coarsely doubly-serrate margins and lopsided bases; rough, often with heavily buttressed bases 33
32. Trees not as above 34
33. Leaves quite rough; gray twigs, noticeably rough to the touch; bark ridges vertical; bark cross-section shows even red color throughout ----- Red Elm
33. Leaves smaller than preceding, and smooth to slightly rough; brown twigs smooth to slightly rough; bark ridges criss-cross; bark cross-section shows red and white alternating layers ----- White Elm
34. Trees with smooth, gray bark 35
34. Trees not having smooth, gray bark 36
35. Small trees with very fine twigs, and bark with strong, muscular ridges ----- Blue Beech
35. Large trees with bark not fluted or ridged ----- Beech
36. Small trees with fine twigs and "shreddy" bark ----- Ironwood
36. Trees with right-angled branching & "blocky" bark; leaves clustered at tips of branches ----- Black Gum
36. Trees with "blocky" bark, showing orange inner bark in crevices between the blocks; plum-like fruit resting on a flat, woody calyx ----- Persimmon
36. Trees with black bark broken into small, 1-inch square plates showing transverse lenticels; fine twigs with a bitter taste and a sour smell, fruit clusters of small, black cherries ----- Wild Black Cherry
37. Trees with small thorns in pairs, one on either side of the juncture of the leaf stem with the twig 38
37. Trees without thorns 39
38. 7-17 leaflets; white, fragrant flowers in long, dense clusters; 3-inch, brown to black pods; deeply-fissured brown to black bark ----- Black Locust
38. 5-11 leaflets; dark green above, lighter and pubescent beneath; prickles on leaf stems; shrub or small tree, bearing a strong resemblance to young black locust trees ----- N. Prickly Ash
39. 11-23 leaflets; pith chambered, fruit husks do not split open, shell of nuts sculptured 40
39. 5-11 leaflets; solid pith; fruit husks split open; shell of nut smooth or slightly ridged 41
40. 13-23 leaflets; pith tan in color; fruit almost round; bark chocolate-colored and roughly ridged ----- Black Walnut
40. 11-21 leaflets; pith chocolate-colored; fruit oblong, with a hairy, sticky husk, gray bark with flat, shallow ridges ----- Butternut

41. 5 leaflets, the terminal 3 much larger than the basal pair; bark "shaggy" on trees more than 5 inches in diameter ----- Shagbark Hickory
41. 5 leaflets (occasionally 7); bark dark gray, close and tight; twigs and buds much finer and smaller than preceding ----- Pignut Hickory
41. 5-9 leaflets (rarely 11); distinctive sulfur-yellow buds; fine twigs; thin, tight, gray bark ----- Butternut Hickory
42. Leaves both singly and doubly compound, with very small leaflets; fruit a long thin, "wavy-shaped", glossy-brown pod; long, branched thorns on twigs and trunk; bark dark and tight ----- Honey Locust
42. Doubly-compound leaves, often 2 feet long; fruit a thickshelled, brown pod, containing large, bony seeds; the shallow bark ridges have very sharp, wavy edges; the clublike twigs are mottled in color ----- Kentucky Coffee-tree
42. Very large doubly-compound leaves, often prickly above, white flowers in large panicles; very stout stems, covered with prickles; small tree---Hercules' Club

Note: The above Key is based largely on summer characteristics including leaves. To recognize trees in winter other Keys have been developed such as Harlow's Twig Key to the Deciduous Woody Plants of Eastern North America. After you have learned to use the present Key, it is good experience to use other standard Keys. The following are suggested:

Harlow: Trees of Eastern United States and Canada.
McGraw Hill Book Company, New York

Otis: Michigan Trees. University of Michigan Press,
Ann Arbor, Michigan

Deam: Trees of Indiana. Indiana Department of Conservation,
Indianapolis, Indiana

Further information or additional copies of this mimeograph can be obtained through your County Agent or nearest forester, or the Department of Forestry and Conservation at Purdue University, Lafayette, Indiana.

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